

W3C Recommendation

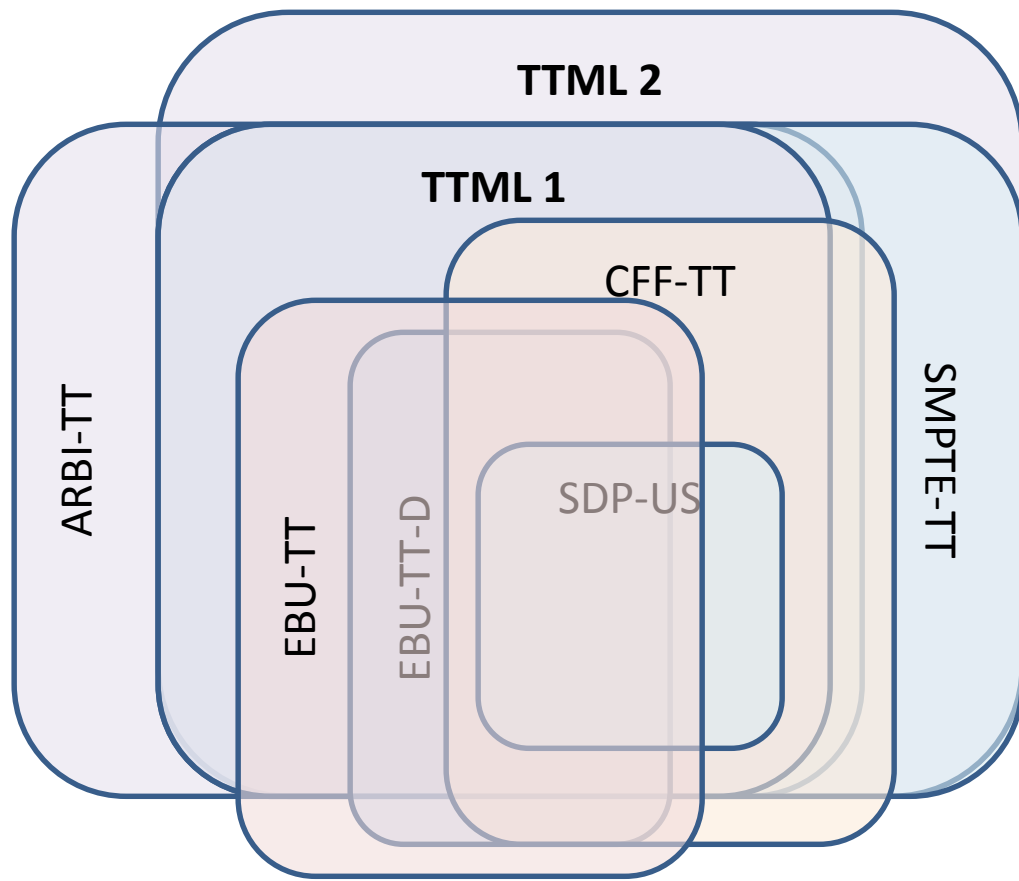
TTML Profiles for Internet Media Subtitles and Captions

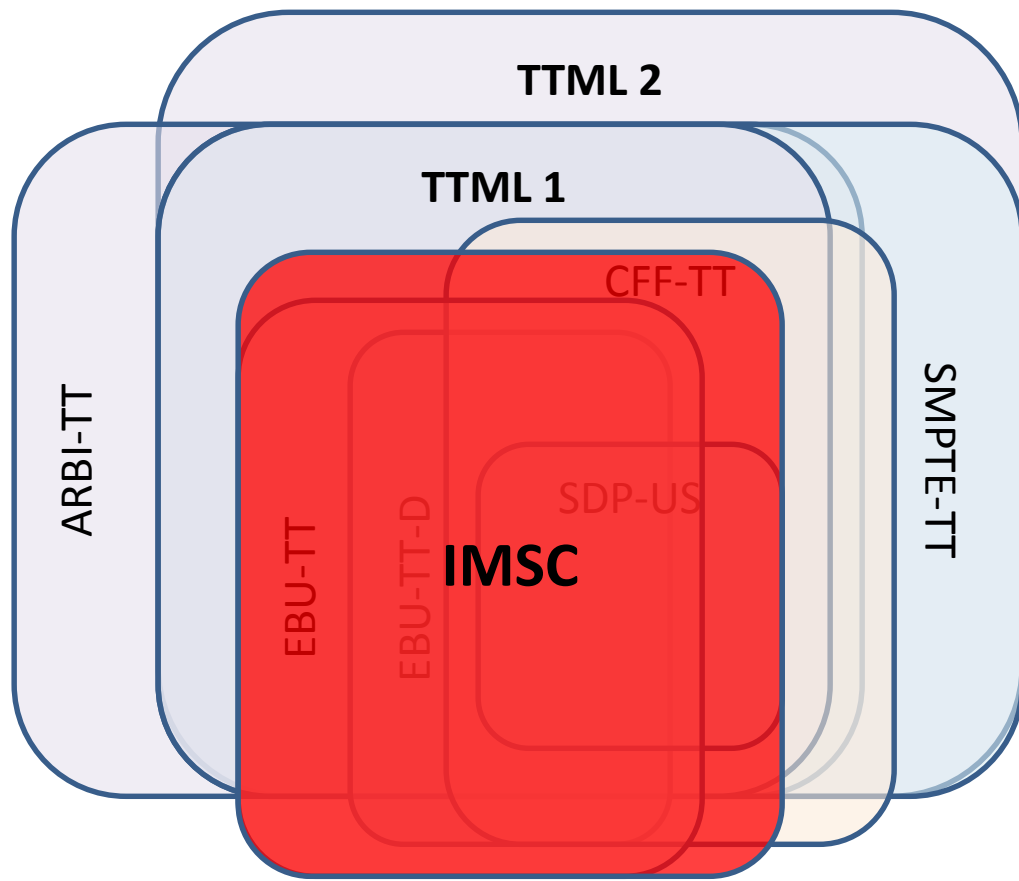
IMSC

Worldwide Subtitles and Captions Convergence

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Supported by MovieLabs





SMPTE-TT

[SMPTE ST 2052-1:2013](#) (initially published in 2010)

Designated safe harbor format by the US Federal Communications Commission [[FCC § 79.103 \(c\)](#), 2012]

Extends [TTML](#) with image support (@smpte:backgroundImage) and additional metadata (smpte:information)

Imposes no practical constraints on TTML

- Poorly supported features, e.g. #clockMode-gps
- No constraint on document complexity

CFF-TT

Practical profile of SMPTE-TT developed by [Ultraviolet](#) ecosystem

- Public [specification](#) supported by tools and vendors
- Based on study of studio catalog titles and CEA-608

Contributed to W3C as basis for IMSC (2013)

IMSC

Worldwide collaboration of the W3C Timed Text Working Group (TTWG)

Application of [TTML](#) for Internet subtitles and captions

Reduces fragmentation by bringing together multiple profiles of TTML

- Superset of [CFF-TT](#)
- Practical application of SMPTE-TT ([ST 2052-1](#))
- Superset of EBU-TT-D ([Tech 3380](#)) (developed by the [EBU](#))
- Superset of [SDP-US](#)

Intended to evolve with worldwide subtitle and caption requirements

Status

IMSC 1 Recommendation [April 2016]

Superseded by [IMSC 1.0.1 Recommendation](#) [April 2018]

[IMSC 1.1 Candidate Recommendation](#) [May 2018]

- Based on TTML 2
- Superset of IMSC 1.0.1
- Adds support for Japanese language features, HDR presentations, stereoscopic presentations...